

W5YI REPORT

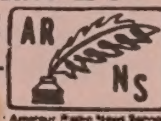
Up to the minute news from the worlds of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

Dits & Bits

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October 15, 1986

Ham Radio Proposal for Manned Space Station

According to Amateur Satellite Report, the biweekly AMSAT member newsletter, representatives of NASA, AMSAT and the ARRL met in San Diego at the ARRL National Convention recently to lay the groundwork for a permanent amateur radio presence aboard the NASA Space Shuttle. The manned space station is due to be launched in 1995.

The kickoff meeting was organized by Roy Neal, K6DUE, recently retired from NBC News. In attendance from AMSAT was president Vern Riportella, WA2LQQ and Vice President for Manned Space Operations, Bill Tynan, W3XO. The League was represented by president Larry Price, W4RA and Dave Sumner, K1ZZ, its Executive Vice President. NASA's Dr. Tony England, WØORE co-hosted the meeting along with Roy.

A working group headed up by amateurs from the Radio Amateur Satellite Corporation was organized to work up a proposal to be presented to NASA next year. An outline of the proposal is deadlined for November 1st. The proposal will look toward amateur radio being built into the space vehicle rather than being added later. The League may assume management of the project once it reaches a more advanced level. The project is being tagged the SSAR program, Space Station Amateur Radio.

I talked to Tony England, WØORE, this

past weekend. "The first six months of the activity will be devoted to determining what we would really like to do. Once we understand that better, it will become clearer who should take the leadership on it ...but it will definitely be a combination of ARRL, AMSAT and the various amateur radio clubs at NASA centers."

"There are three objectives of the SSAR program. The first is recreational radio for people on board who may be in space for half a year or more at a time. The second is that those folks on board won't be able to use it all the time and it is a big investment for the amateur community to support it. We want it to be available on some kind of automatic mode to amateurs on the ground ...such as an OSCAR or repeater mode. That is not clear yet."

"The third objective is the one that I am most excited about. It involves expanding the amateur community's definition of service radio. That is to supply an educational service in local communities ...particularly to schools. What we are talking about is two-way voice and at least one-way fast scan TV from the station through an amateur satellite to a mobile van of some kind that can be loaned to local clubs. Retired amateurs who have time during the day would set this up in a local school room and carry on two way classes with science students in a small town some

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place with the crew on board the space craft."

Tony said that he felt a permanent Amateur Radio presence on the space station would also be instrumental in persuading youngsters to pursue scientific, mathematic and engineering careers. Tony would like to be one of the astronauts aboard the Space Station. "It is certainly conceivable, but this is something that is eight or nine years away. ...There is a great interest among the astronaut corps in the amateur radio concept."

ASTRONAUT NOVICE CLASS HELD!

"We even held a Novice Class this summer for six astronauts to try to get new amateurs. I didn't teach the class, but I organized it. We ended up getting only one additional one, Ken Cameron - a new astronaut. He is now working on his General Class. He got his Novice during mid-summer. The reason that the others went on to other things is that they were not sure that anything was ever going to come of it (amateur radio on the Space Station)."

"The pressures on the astronaut groups also kept them at the Cape (Kennedy) and Washington - so we didn't keep five of them. They also were more interested in using amateur radio from space than amateur radio on its own. I think that if there is some assurance that amateur radio will be included in the Space Station you will see a whole lot of folks (astronauts) getting licenses."

ON THE MORSE CODE...

Both Tony and Owen Garriott/W5LFL before him are Advanced Class amateurs. FCC rules require an Extra Class license to transmit from space. I asked Tony's opinion on that.

"It is not required that astronauts know the Morse Code. It is not very important for an astronaut to know the Morse Code."

"I think astronauts should be amateurs to use the amateur facilities from space. There should not be any special permission that allows them to operate on amateur frequen-

cies without being amateurs. I know of know earthly reasonor 'spacely' reason for that matterwhy an Extra Class license should be required, however, to transmit from space."

"I think the code is an important communication mode, but I don't really believe it should be so central to amateur licensing." Tony said he would be getting an Extra Class license "when I get my code speed up. I enjoy CW, but it is hard to find the time to do it. When I worked HF I did about half CW. I would be in favor in having part of the (ham) bands digital or code and preserving parts of the bands that different classes could use without code knowledge."

"I am concerned about the importance that the amateur community places on an Extra Class license and the perception of incoming amateurs of that importance. If I am a new person starting and I know a lot about electrical engineering and everyone is telling me that the highest honor in Amateur Radio goes to someone that can send code at 20 words per minute I would begin to wonder where are their priorities? What is this amateur radio really about?"

"I think there ought to be alternate ways that if someone excels in certain areas that are recognized as important to amateur radio and can demonstrate that through an exam ...or whatever ...they should earn the high honor of being an Extra Class. If it is important to limit certain parts of the band from certain kinds of communication ...well that is not involved with licensing, that is involved with what technique you use on what part of the band."

Owen Garriott/W5LFL holds a PHd. in Electrical Engineering but because he only copies 13 wpm qualifies only for the Advanced Class license. Every astronaut thus far has had to obtain a waiver to operate from space because he couldn't copy 20 words per minute.

Tony England, a geophysicist, has now assumed the lead amateur NASA astronaut role now that Dr. Owen Garriott, W5LFL, has retired from NASA. England works in such

"I am a currently licensed Extra Class amateur radio operator and wish to be a volunteer examiner. I have never had my station or under "The W5YI Report" Program? If so, please send a copy

WOULD YOU LIKE TO BECOME A VOLUNTEER EXAMINER?

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areas as signal processing and systems analysis. Much of his research has been in radar ...remote sensing ...radio wave propagation. "This is very close to amateur radio," he commented.

ON THE SPACE STATION....

To the question how assured are we of having the Space Station, Tony responded, "I think it is a 'for sure' for the mid-1990's. We are trying to use the President's directive which is to have a permanent manned Space Station in a decade. He said that in 1984. We are interpreting that to mean that we want at least a part of the Space Station to be permanently manned in place by 1994. This means that we must start putting the elements up in 1993. The deadline is somewhat 'artificial'. It is not like a planetary mission that must launch at a specific time. It is a presidential decision and we are taking it very seriously."

"I think the chances of having a permanent amateur radio station on the Space Station are very good ...particularly in the service mode. Chuck Biggs, KC5RG, of NASA's public affair office, will be working on the initial definition phase. He is very enthused about it. NASA also recognizes its educational function in its charter and the education office is also very supportive. We are just in the formulative stages but there is considerable enthusiasm for the concept."

Even though NASA is not in the commercial payload business any more, Tony said that he didn't think that would have any effect on amateur radio. "Amateur radio is considered a science payload. The pressure has not been reduced on science. There is a reasonable chance that the next amateur radio payload will be on ASTRO-1 - a space-lab type mission due to fly in late '88 or '89. It will have telescopes to look at the stars."

ON THE CHALLENGER DISASTER...

"I was fairly close to two aboard Challenger. The two emotions that were strongest were the sadness and the loss and the anger that we weren't smart enough to anticipate the problem."

Emphasized by Tony, was the importance of AMSAT attaining a geosynchronous capability since the Space Station's orbital inclination will be 28.5° and will need the AMSAT Phase 4 system to extend its communications range.

Vern Riportella, WA2LQQ, AMSAT president advises that preparations for the Phase 4 satellite are underway. The cost of the amateur satellite is in the megabuck range, so assistance from industry and other avenues are being looked into. Vern also said that 1987 will be a very busy year for amateur satelliters. Phase 3C is scheduled to be fly from French Guyana early next year. More Russian and UOSAT satellites are also due to launch.

THE COLVINS OFF ON ANOTHER DXPEDITION

We received a nice note this past week from Iris/W6QL and Lloyd/W6KG Colvin - the globetrotting YASME DXers that have operated from more countries than most of us have worked!

As you read this, Lloyd & Iris are en-route to a half-year YASME DXpedition to the Indian Ocean area. The DXpedition is dedicated to the memory of the famous DXer, Don Wallace, W6AM who became a silent key a year and a half ago. Don was president of YASME for ten years and traveled to about 100 countries in his lifetime.

Lloyd and Iris will spend about three weeks at each DX stop. Last year, Iris and Lloyd made 50,000 QSO's during six months in countries of southern Africa. The first operation this year is expected to be 3B8 in Mauritius. Operation will include the CQWW Phone Contest in October. As always, all QSL's go to the YASME Foundation, P.O. Box #2025, Castro Valley, CA 94546.

To make YASME contacts even more interesting (and to encourage QSLing), a new YASME Supreme Award is announced. It is a beautiful YASME boat trophy and requires that QSLs for 60 different YASME calls, operated by YASME officials be submitted to WØMLY. There is no charge for YASME awards.

many computer bulletin boards and in club newsletters. We do not get any in- come from this and would appreciate it if you would publish our small classified ad (see margin between pages 4 & 7) on license preparation materials. Thanks!

WOULD YOU DO US A FAVOR?

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FCC DENIES 6-METER COMPUTER CLASS.... (DOOR LEFT OPEN FOR 902-928 MHZ BAND)

The Don Stoner, W5TNS, proposal (assigned RM-5241 last December) to reallocate 2 megahertz in the 6 meter ham band to public personal computer interconnection has been denied and dismissed by the FCC.

The petition was dismissed on the grounds that the band that was asked for just isn't available for the kind of use requested. Six meters is an amateur band and the FCC did not feel that they had the discretion to put a different service, other than amateur, in this spectrum. Stoner had suggested an general public service with no amateur license required.

His idea for a Public Digital Radio Service (PDRS) involved the use of a packet radio circuit to link the nation's microcomputer users.

The fact that Stoner had suggested a non-amateur service on amateur spectrum was a fatal shortcoming. The ITU countries agreed at the WARC-79 that the 50.0 to 54.0 MHz band would be solely allocated in Region 2 to the Amateur Service.

The FCC did say, however, that they still are looking for a place to put a computer hobbyist service - an unlicensed (or at least a no-code) service for computerists to intercommunicate keyboard to keyboard via radio.

In order to stimulate that discussion the FCC did suggest that other bands be looked at including the 902 to 928 MHz amateur band. The FCC's Ray Kowalski said that "We are not saying that this is where it should be ...or that such action is planned. If the allocation is right and if the technology is possible, this band is a possibility."

"We are hoping that we are not being coy with the public in suggesting another band that is equally useless, but we would like to see if someone would like to do some research on that and see if there is a theory under which it could be done in that or any other band which meets all of the objectives without some of the shortcomings."

The FCC Commissioners did recognize that a Computerist Hobby Class should be revisited when they dismissed 'no-code.' "We are trying to keep faith with what we said before," Ray said. "Much of the favorable impetus for having at least one class of code-free license still exists and we are still looking to see where that might be accommodated."

The 902 to 928 MHz band is a shared band. Footnote 707 to the WARC accord reads "In Region 2 this band is designated for industrial, scientific and medical (ISM) applications. Radiocommunication services operating in this band must accept harmful interference which may be caused by these applications." The 902-928 MHz. band is not exclusively an amateur allocation.

Kowalski said that you have more flexibility with a band where the ground rules are that you must accept any interference you might encounter. "This is one of the principle things that we are considering. There is no specific band that is allocated to a service where this (personal computer-to-computer radio communication) would fit. You run into eligibility problems in the land mobile service and qualification problems in the amateur service. Perhaps in a shared ISM band there are some tradeoffs - that if the users do not mind the interference potentials - they might be able to get some use out of it."

ICOM ANNOUNCES NEW 220-MHZ HAM RIGS

In anticipation of Novice Enhancement, ICOM America is introducing their new 220-MHz IC-03AT Handi Talkie and 220-MHz IC-38A Mobile Tranceiver.

The IC-03AT is the 220 MHz counterpart of the popular 2-meter IC-02AT. The IC-03AT will feature 220-224.995 MHz coverage, an LCD readout, 2.5 watts output (5 watts optional), 10 memories, memory scan, program scan and 32 built-in subaudible tones. Available at Christmas time (which is probably when the 220 MHz. band will become available to Novices.) Price not announced.

The mobile IC-38A 220 rig has 25 watts output, 21 memory channels and full scanning. List price: \$459.00. Available this month.

THE ANSWERS TO ALL FCC TESTS ARE AVAILABLE!
FCC-Novice Study Guide \$3.50 + \$1.00 postage
Code Tapes 5, 13 or 20 wpm \$4.95 + \$1.00 postage
(New "Learn the Code" tape = \$4.95)
The W5YI Report, even though a VEC in all regions

AUGUST 1986 VE PROGRAM STATISTICS....

	<u>August 1985</u>	<u>1986</u>
No. VEC's	*65	*75
No. Test Sessions:	280	288
ARRL 39.6% (1986)		
W5YI 25.0%		
DeVRY 12.2%		
CAVEC 6.9%		
Others 16.3% (35 VEC's)		
Year-to-Date Test Sessions:	2109	2483
Elements Administered:	4894	4555
ARRL 44.6% (1986)		
W5YI 15.6%		
DeVRY 11.4%		
CAVEC 9.8%		
Others 18.6% (35 VEC's)		
Year-to-Date Elem. Admin.:	44288	43563
No. Applicants Tested:	3299	3110
ARRL 44.0% (1986)		
W5YI 16.6%		
DeVRY 11.5%		
CAVEC 9.4%		
Others 18.5% (35 VEC's)		
Year-to-Date Applic. Tested:	29128	29915
Pass/Upgrade Rate, All:	61.03%	57.15%
Pass/Upgrade Rate, W5YI:	64.4%	50.1%
Applicants Per Session:	11.8	10.8
Applicants Per Session, W5YI:	8.5	9.3
No. Elements Per Applicant:	1.48	1.46
No. Sessions Per VEC:	4.31	3.84

(Source: FCC, Washington, DC)

Note: * = The FCC considers each of the 13 testing regions to be a separate VEC. (The thirteen regions are: Call sign districts 1 through 0, plus Alaska, Caribbean and the Pacific.) Thus national-in-scope VEC's such as ARRL, W5YI, DeVRY are actually 13 different VEC's each.

The figure of 75 different VEC's is a little misleading. There are actually only about two dozen different groups coordinating amateur radio examinations. Four groups (ARRL, W5YI, DeVRY and Central Alabama) historically account for more than 80% of all amateur testing.

August 1986 marks the first month that the ARRL has not administered at least 50% of all tests given. Non-ARRL VE teams administered over 55% of all examinations and applicants during August.

PRIVATIZING COMMERCIAL RADIO EXAMS

The FCC in 1983 transferred amateur radio operator license testing to the private sector. The success of the volunteer examiner system has exceeded all expectations. All commercial radio operator examinations appear next. There are currently six types of commercial radio operator licenses and two types of endorsements issued by the FCC.

The Commission has asked for comments on legislation it may propose to Congress which would enable the FCC to delegate responsibility for preparing and administering all FCC commercial radio operator examinations.

The FCC mentioned that the same justification exists for privatizing commercial radio operator license examinations that existed when amateur license tests were turned over to the amateur community. That justification was to increase the availability of license examinations at a time of increasing budgetary and personnel cutbacks.

The FCC said that by delegating commercial radio operator examination authority to a private organization with the resources to better prepare and administer the tests...

- (1.) more contemporary examinations,
- (2.) more flexibility to meet public demands for increased geographic availability, and,
- (3.) more frequent examinations as often as needed may be realized.

The examining organization would be selected through a competitive bidding process. Comments from the public are requested on whether to propose the enabling legislation, and how a private examiner should be selected and funded.

Specifically, the Commission is considering whether to allow the examiner to collect fees from applicants for commercial radio operator licenses to offset administrative costs. The FCC also seeks comments about whether the proposed delegation of authority would violate any domestic or international regulations.

(Action by Notice of Inquiry, FCC 86-400)

COMMUNICATIONS PRIVACY ACT PASSED...

The Electronic Communications Privacy Act (EPCA) has passed the Senate. Unbelievably, it still is not clear when, how or how many times it was passed. It may have passed twice!

The EPCA was added as an amendment to the Drug Abuse bill in a caucus. No one seems to have realized that. When the Drug bill passed, the sponsors of the EPCA claimed that the Privacy Act had been passed as well!

The House and Senate have different rules regarding the relevance of amendments. Senate rules allow you to attach anything to a bill. The House does not. Due to the different handling of amendments, to prevent the requirement of having the EPCA being reconciled with the House, the Senate passed the bill again Wednesday, October 1st. The Senate bill S.2585 was re-numbered to HR.4952, the same number as the House version. The text, however, remained the Senate variation.

The next day HR.4952 was re-introduced into the House (technically the Senate version) and passed on a voice vote. This parliamentary maneuver enabled Congress to avoid a conference to reconcile any differences.

The bill was passed before it was reported to the Communications Subcommittee and before the report was released by the Judiciary Committee. Both obligations must be fulfilled, so S.2575 still exists and a report must still be issued on it.

The EPCA will be law once the report is issued and President Reagan signs the measure. There is a lot riding on the report which is attached to the bill - such as the definition of a "surreptitious interception device." The report interprets the language of the bill. In some cases the bill's language is so unclear that no one will know what it means until the report comes out.

In its present form, HR.4952 makes it legal to monitor the radio portion of a cordless telephone call or a tone pager, any marine and aeronautical radio communication, any communication transmitted "for the use of the

general public", any Amateur, CB or GMRS transmission, any governmental, law enforcement, civil defense, private land mobile or public safety communications (including police and fire) which are "readily accessible to the public."

Monitoring of cellular phone, older car phones/paging, broadcast remote pick-up stations and certain other private radio communications will be against the law and subject offenders to hefty fines and/or jail terms. For the first time laws can be broken with a common everyday scanner.

We will have more to say about the Electronic Communication Privacy Act once the report comes out and the bill is signed into law (probably before our next issue.)

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ON PERSONAL RADIO COMMUNICATION....

In our last issue we discussed "Working Paper #20", the personal radio think-piece released by the FCC's Office of Plans and Policy (OPP) last month. The purpose of the document is to stimulate discussion and critical comment within the FCC, as well as outside the agency, on personal communications issues. The entire document runs to some 100 typewritten pages and is necessarily highly capsulized here.

The main point of the essay is that different regulatory approaches are needed if the public is to realize their unfulfilled objective of adequate personal communications. The "working paper" carries no official weight with the Commission - and merely puts forth some ideas that OPP researcher, Jim McNalley (also WB3APV) considers worthy.

In addition to the amateur radio matters we previously covered, OPP also made the following points about CB radio:

(1.) Commercial use of the General Mobile Radio Service should be precluded. GMRS comprises 8 paired UHF frequencies and was carved from the old 460-470 MHz CB service.

(2.) GMRS application procedures should be streamlined and users should be allowed access to all channels rather than just a specific pair.

(3.) GMRS interconnection with the switched telephone network (phone patching) should be permitted.

(4.) Even though 11-meter CB radio has diminished in popularity, the 40 channels are sufficient for the currently estimated three million CB stations.

(5.) CB radio interference is declining and there is no apparent reason why CB radio should not continue unchanged as a recreational/traveler's radio service.

OTHER PERSONAL RADIO ALTERNATIVES...

The FCC should consider allowing personal radio operation on 900 MHz SMRS, Special Mobile Radio Systems. SMRS is a private carrier managed communications system operating in the 800-900 MHz band. Currently eligibility is limited to Public Safety, Industrial and Land Transportation Services.

The price will be a significant barrier to entry, but if personal users are willing to pay the price, SMRS operation should easily be able to satisfy their needs.

(2.) The FCC should consider allowing personal operation on any commercial repeater system. A case-by-case decision as to the compatibility of personal use on a commercial system could be made by the repeater manager.

(3.) Allocate spectrum in the 900 MHz ISM or 1.215-1.300 GHz and for personal use. Currently the Amateur Service is authorized the use of 26 MHz of spectrum in the 902-928 MHz band and 85 MHz in the 1215-1300 MHz band. Relatively affordable equipment is available for direct and repeater-type operation and the Commission may want to consider allocating part of this spectrum for personal use or create a combined amateur/personal radio service. "Such a service might generate additional interest in the Amateur Radio Service."

(4.) The Amateur Radio Service should be restructured for more accessible personal operation. The 2-meter and 420-450 MHz amateur bands feature widespread direct and repeater communications of a conversational nature. The Commission may wish to inquire into the

feasibility of permitting extensive personal communications in all or part of these bands, with members of the household of a licensed amateur operator being permitted to operate that amateur's equipment for home-to-mobile (or portable) communications, even if the licensed operator is not present or not a party to the conversation.

All such communications would be identified by the call of the authorized amateur operator, who would have ultimate responsibility for proper use of the station. The operating discipline that is characteristic of the Amateur Radio Service (ARS) may be sufficient to minimize abusive operation.

...this approach is a potential shift away from the experimental/instructional communications of the ARS to more expedient communications, or purely recreational communications. Nevertheless, such a change in the fundamental nature of the ARS would still be in the hands of the amateurs who, in charge of this communications activity by members of their households, would be able to initiate appropriate action needed to maximize the overall value of their service ...or cause such operation to be discontinued if significant problems developed.

(5.) The re-allocation of several channels to the GMRS from the Business Radio Service or one of the other Industrial or Land Transportation Radio Services may be justified. A 450 MHz and allocation to the GMRS would avoid the need for a multi-band operating capability. Such a re-allocation might be appropriate if the GMRS continues its tradition of being a disciplined radio service, if spectrum-efficient technology is widely used and if such technology is not in use in the Business Radio Service.

Again, remember that the above are just the suggestions of one researcher in the FCC's Office of Plans and Policy. They do provide much "food for thought," however.

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AMATEUR ISSUED \$1,450 FORFEITURE....

In one of the longest running investigations involving malicious interference to amateur communications, W4UWH, David G.

Ackley, (Technician Class), owner of Ackley Avionics of St. Thomas, U. S. Virgin Islands has been issued a Notice of Apparent Liability to Monetary Forfeiture (fancy FCC name for a fine) of \$1,450. The forfeiture was assessed for several Part 97 violations including intentional interference, failure to identify his amateur station and operating outside of the Technician Class band

The object of the malicious jamming was Herbert L. Schoenbohm, KV4FZ of St Croix. Ackley retransmitted Schoenbohm's amateur transmissions on 40 meters. FCC monitoring indicated that the intentional interference was coming from Ackley's St. Thomas residence. An FCC station inspection later confirmed this. The investigation was handled by the Commission's San Juan, Puerto Rico, office.

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- Supposedly "top secret", the October issue of Popular Science details how Northrop Corp's "stealth" bombers and Lockheed's F-19 "stealth" fighters are made to be radar invisible. It is done by using special materials and coatings that absorb radar signals instead of reflecting them and partly by equipping the aircraft with sophisticated electronic black boxes that obscure its radar signature. Special attention is also given to the airplane's shape to avoid sharp edges and large, flat surfaces.

- TV broadcasters very concerned that additional sharing of UHF-TV spectrum with Land Mobile interests could put a damper on future HDTV (high definition television) broadcasting. The 1,125 scan line/60 Hz HDTV format takes up roughly three times the spectrum of a conventional 6 MHz TV signal. HDTV quality is similar to that of 35mm movie theatres.

- "Scrambling" legislation is a hot issue in Congress. Broadcasters, pay TV programmers and cable firms are opposed to legislation regulating encrypting and distribution of satellite programming. Congress is asking major pay services to commit in writing to participate in the development of reasonably priced program packages for home dish owners. Bill by Senator Gore would allow for third-party distribution of programming and asks the FCC to set a single decoder standard. Another bill allows "superstation" marketing without the stations' consent.

- Two of Radio Shack's personal computers - the Tandy 1000SX and 1000 EX, previously identified as sources of excessive RF radiation, have now been certified by the FCC as acceptable for "Class B" home use. Tandy altered the design and resubmitted them for Commission approval. The FCC is cracking down on unacceptable levels of RF emissions from PC's and has already issued over \$200,000 in fines against vendors!

- A new invention called "Macrovision" makes it very difficult for all but the most electronically proficient to copy video cassette tapes. The copy-protection process involves AGC recognition of pulses imbedded on copies as high-level video signals and turns itself down to the lowest level! Fifty percent of the home video industry now using the process. Movie makers hope it will put an end to consumers copying rented tapes.

- Palomar Engineers has available a helpful report entitled "Using Ferrite Beads to Keep RF out of Television Sets." It tells what kinds of beads and toroids to use and where to put them to suppress the most common RF interference problems. Cost: FREE but send an SASE. (Box 455, Escondido, A 92025)

- Earnings of The Home Shopping Network, cable TV's bargain basement, are soaring! Fiscal 1986 earnings were \$17 million (vs. \$157 thousand.) As Jimmie Durante used to say, "Everybody's getting into the act!"

- How much are the ham bands worth? More than you would ever guess! Bob Foosaner, Chief of the FCC's Private Radio Bureau was recently quoted as estimating the value of the 32 MHz recently allocated to industry from the 800-MHz Land Mobile Reserve spectrum as being worth \$2.8 billion to 10 times that amount! The VHF/UHF ham bands are more than double that size!

- Computer makers changing to the new superfast (16 MHz) Intel 80386 chip. Compaq is the first to unveil an 80386 PC - the Deskpro 386. Others will soon follow. Word has leaked out about Bell Labs' new "Neuron Chip" that mimics the way nerve cells transmit messages from various parts of the body to the brain. Like the human system, the neuron chip can give you a good (but not perfect) answer faster than existing digital circuitry. Can a truly reasoning computer be far off?

UPDATE ON MICHIGAN AND MEXICO....

Nothing brings letters and phone calls pouring out of the woodwork more than controversial situations involving amateur against amateur. There is nothing more fierce than two amateurs on different sides of the fence both strongly feeling their position is legally or morally valid. Since newsletter editors (and VEC's) often operate in the area between opposing factions, they are frequently targets of much amateur wrath. Such is the case of Michigan 2-meter coordination and the U.S./-Mexican underlicensed amateur.

MICHIGAN 20-KHZ PLAN OPPOSITION....

Michigan repeater owners voted on September 13th to adopt a 20-kHz band plan between 146 and 148 MHz. It marked the first time that a high population density state opted for 20-kc 2-meter channel centers.

The Michigan Repeater Council contacted us after their Lansing general meeting and presented us with a press release advising the world of their 20-kHz decision. We spoke to the new chairman of the Michigan Repeater Council, Rod Moag, W0NDS, of Ann Arbor, and printed the story.

Before long the phone was ringing from several opposing factions. It is apparent the Michigan decision is more controversial than we had been told. Callers (and writers) primarily objected to the statement by Moag that they had received "good cooperation from neighboring states..." and that "...all is well."

George Waldie, W8JRL, of Mount Gilead, Ohio, took issue with that statement. Waldie is Chairman of the Ohio Area Repeater Council - the Ohio state coordinating organization. Ohio is a member of the Great Lakes Conference along with Indiana, Wisconsin, Pennsylvania, Indiana and the Province of Ontario (Canada.) These states have a unique situation in that 2-meter propagation is enhanced by travelling over water.

"You should be aware that Michigan does not in any way have the approval of the Ohio Area Repeater Council. ...Our 'cooperation'

consists solely of checking their various allocation schemes to try to avoid immediate problems." He called Michigan's action "arrogant" and "disruptive" and said he was "seriously worried" about the future.

Waldie said that the views of the OARC was transmitted to the Michigan September 13th meeting in the form of a letter that was to have been read prior to the final vote. He reminded Michigan repeater owners, that as far back as 1984, all Great Lakes Conference coordinators opposed Michigan's adoption of a 20-kHz plan.

He said that the thought that neighboring states might follow their lead is "wishful thinking" and Michigan would become a "source of irritation." Citing that every argument for a 20-kHz band plan assumes operation in a general 20-kc environment, Waldie charged that Michigan gave no consideration to a different channel separation plan in the heavily populated areas neighboring states. "Consideration of opinions and rights of others have been notably absent with the deliberations of the Michigan Repeater Council..."

Joe Phillips, K8QOE, OARC's PR man, said they were angry "with anything that seems to indicate we have cooperated and that as soon as Michigan leads the way, we will follow. This is pure nonsense. We believe political pressure to get additional repeater pairs in Detroit was heavy. Every surrounding state, either through personal appearance or letter, has let Michigan know of their opposition (to the 20-kHz plan) two years ago. They were opposed then and they are opposed now. We have told them 'no' constantly."

"We will continue to keep interference down as much as possible. If an intolerable situation develops, we will march to the FCC and tell them we have tried everything ...we can't solve this ...throw those stations (causing the interference) off the air. Based on what happened in Alabama, we believe they will do it."

The Michigan transition to a 20-kHz 2-meter band plan - slated for a December completion - is certainly not as peaceful as we have been led earlier to believe.

RULES APPLYING TO XE2 HAM OPERATION

If you think the Michigan matter is controversial, the Mexican situation is even more so! Confusing is a better word. Mexico has been issuing "courtesy" (not really "reciprocal") Class 2 ham operator licenses to U.S. licensed amateurs visiting in Mexico.

The controversy concerns the privileges U.S. amateurs have while operating in Mexico (or Mexican waters) using a Mexican Class II amateur license. Some amateurs, armed with a translation (from Spanish) of the Class II license feel that they have full Class II privileges regardless of their U.S. class of license. A Mexican Class II license allows 250 watts output on all bands - including H.F. bands.

Thus Novice and Technician U.S. amateurs - particularly boaters in Baja California - are operating in the voice mode on 40 and 20 meters. Many are using the various H.F. networks to pass phone patch traffic from Mexico to U.S. destinations. Some maritime ham networks, feeling that this is a violation of the rules, are precluding Novice and Technician XE2 operators from participating in the high frequency nets.

A deep division has resulted between those that condone and those that oppose U.S. underlicensed XE2 high frequency operation. It has gotten to the on-the-air "name calling stage". At least one maritime net says that the wording on the Mexican license translates to "by virtue of your U.S. license" an alien visitor is awarded a Mexican Class II amateur ticket.

Gene Stephens, KA6HOQ, a net control station for the 40 meter California/Baja Net says that this means the privileges also translate "...you are limited to your home country amateur privileges." Novices and Technicians can not work HF voice by Mexican intention. Stephens has precluded them from participation in his net. Another net has sprung up which permits XE2/U.S. high frequency operation. Again, a case of amateurs against amateurs - both with totally opposing views, both feeling absolutely certain they are right.

The questions to be answered are -

what does Mexico really intend the privileges to be for the gringo XE2's ...and what Part 97 rules apply to American hams aboard U.S. vessels in foreign ports and territorial waters.

Hal Grigsby is the Engineer-in-Charge of the FCC's San Diego (California) office. He said that a Oscar Rivera, a government official involved in communications licensing (and XE1OSH) told him that the privileges translate. XE2's are limited to their U.S. privileges. To discuss it further, Grigsby said that he would set up a meeting with the top Mexican official in Mexicali and Oscar Rivera to get final opinions. Grigsby said that he would put out a Public Notice on what California hams need to do in order to get a Mexican license and just what those privileges were.

He added, "Section 301 makes it clear that the law governing a U.S. vessel is the Communications Act of 1934. A boat owned by an American is a floating piece of U.S. soil wherever it goes in the world. It is also subject to laws of other countries when it goes into foreign ports and territorial waters. The primary law, however, is the law governing the vessel - where it is registered. There may be some overlapping of laws when you get into foreign ports."

It thus appears that U.S. citizens operating in foreign ports aboard American vessels are still subject to Part 97 rules even though they may have obtained foreign ham licenses and are operating with a foreign call sign.

Grigsby invited me to telephone Oscar Rivera/XE1OSH in Tijuana, Mexico, to get his views. Rivera, previously a radio law attorney to the top Mexican government communications official, had been in contact with his government in Mexico City regarding the privileges of alien XE2's. He was most helpful and speaks fluent English. Apparently his understanding of the situation has changed.

He told me that as of right now as far as Mexico is concerned, they do indeed have full all band privileges, but that a review of alien licensing is now underway and this would be changed. The goal of the Mexican government is for U.S. amateur privileges to eventually be the same in both countries.